

Neptune NPT-1030

Metro Access Transport for Packet and TDM

Neptune (NPT) is a family of carrier-class MPLS-based multiservice packet-optical transport platforms, offering best-in-class Carrier Ethernet and packet transport solutions for the metro. Neptune streamlines end-to-end metro service delivery by combining carrier-grade service assurance, visibility, and control, with packet efficiency and unparalleled L1 to L3 multiservice support. Neptune offers converged support for Ethernet, MPLS, OTN, and WDM to provide a powerful, flexible solution for high-performance services and Elastic MPLS. SDN and NFV capabilities allow Neptune to evolve to meet the rapidly-changing metro environment.



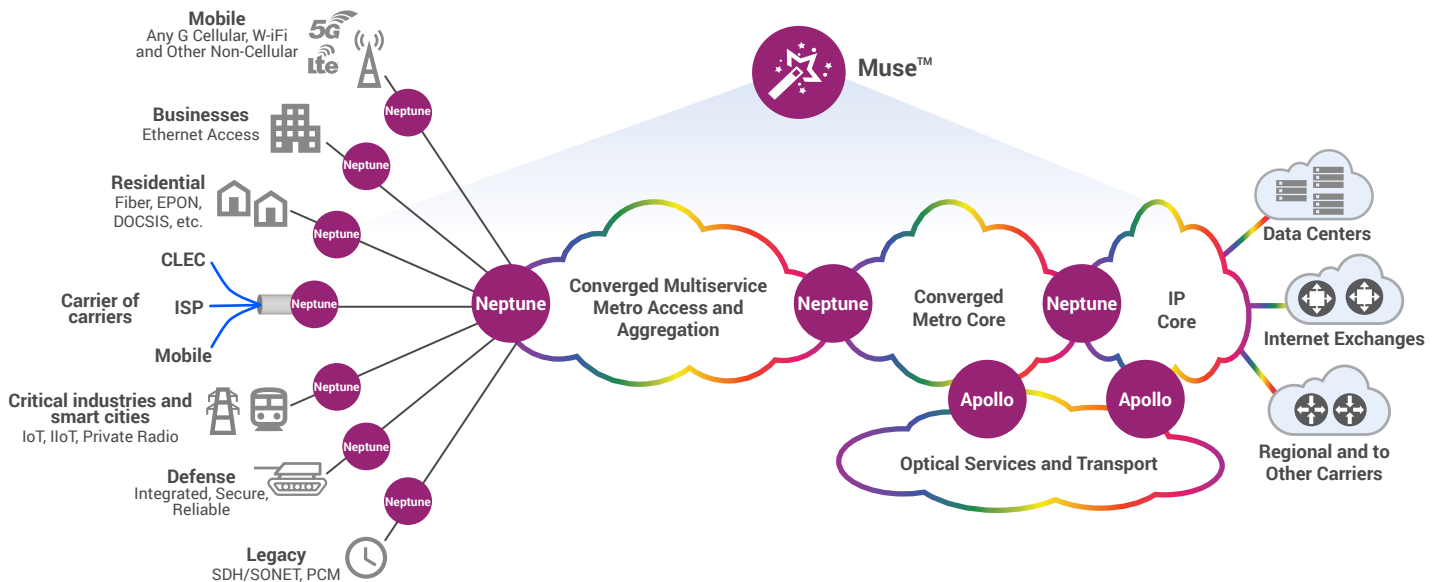
NPT-1030 is a compact, fully-redundant, modular, multiservice packet transport platform, which is 1RU in height and supports Ethernet, TDM, and MPLS-TP with a 60Gbps packet switch and a 15Gbps TDM matrix. Support for native TDM and TDM over CES/CEP make NPT-1030 ideal for operators looking for a modern-metro access packet platform on which to evolve their legacy TDM network. With such a rich and robust feature set, the NPT-1030 is well-suited for a wide variety of applications and networking scenarios. These include; CES for TDM migration, mobile backhaul, wholesale services, residential multiplay, business VPNs, and mission-critical service delivery. Like all Ribbon's transport products, NPT-1030 is managed by Ribbon's Muse™ software suite.

**Elastic
Multiservice**

**Carrier-Grade
Service Assurance**

**Fully-Managed Across
TDM and Packet**

**Elastic
Scalability**



Technical Specifications

Packet	Switch: 60 Gbps Services: MEF CE2.0 (E-Line, E-LAN, E-Tree, E-Access) PN and VPN based Ethernet and MPLS-TP, Ethernet over PDH (EoP) Ethernet over SDH (EoS), MPLS over Transport (MoT), MPLS over Ethernet (MoE) Max. Interfaces: 12/8 x 100/1000 FX, 4 x 10GBE
TDM	Matrix: 15 Gbps with 4/3/1 connectivity (100% Low order granularity) Services: Native TDM, CES (SATO _P , CESoPSN) Max. Native Interfaces: 5 x STM-16, 20 x STM-4, 20 x STM-1, 9 x DS3/E3, 189 x E1 Max. CES Interfaces: 12 x STM-1, 3 x STM-4
WDM	CWDM, DWDM, amplifiers
Timing and Synchronization	SyncE with ESMC, 1588v2, Internal Stratum 3 clock (holdover state), Primary and secondary sources (supports SSM bits), ACR, DCR, loop timing on SAToP, TDM bits (T3/T4)
Protection and restoration	Hardware redundancy for common units, IO Hardware protection (IOP), RSTP/MSTP, G.8032 Ethernet Ring Protection (ERPS), MPLS-TP FRR, Dual FRR, 1:1 Linear protection, PW Redundancy (PWR, IEEE 802.3ad Ethernet Link Aggregation (LAG) with LACP
OAM	Ethernet OAM (IEEE802.3AH, IEEE 802.1ag and ITU-T Y.1731 PM), LSP Ping, MPLS-TP OAM (G8113.2) (CC/AIS/RDI/LB/LT/DM), Bidirectional Forwarding Detection (BFD), RFC 2544 Generator
Traffic management	Traffic Classification (based on Port, VLAN, Port+VLAN, IEEE 802.1p, IPv4/IPv6 TOS and DSCP), Diffserv based TM, Network wide Call Admission Control (CAC), 8 Classes of Service (CoS)
Topologies	Mesh, Dual homing, multi-ring, ring, star, linear
Security	RADIUS (client authentication), SSH 2, SW integrity verification (SHA-2), SFTP, Access Control List (ACL), Public key authentication, Port blocked as default
Management	MUSE Lightsoft NMS, EMS-NPT, SNMPv2/v3, LCT
Power over Ethernet (PoE+)	Up to 30W
Pluggable SFP/ SFP+ / support	Electrical, Colored C/DWDM, Tunable, SFP+, bidirectional SFPs/SFP+
Maximum distance	600 km, Single span 330 km
Power input	-40 VDC to -75 VDC, 220V
Power dissipation	Typical: 70W
Operating temperature range	-25°C to +70°C (-13°F to 158°F)
Operating RH range	5% to 95%
Environmental standards	ETS 300 019-1-3 Class 3.3 ETS 300 019-1-1 Class 1.2 ETS 300 019-1-2 Class 2.
Safety	EN 60950/2000, according to LVD Directive 72/23/EEC EN 60825 -1&2
Physical dimensions	44 (H) x 465 (W) x 263 (D)

Expansion Unit

Packet	Max. service interfaces: 12 x 100/1000Base-X, 36 x 10/100/1000 Base-T
TDM	Max. Service interfaces: • Native: 189 x E1/T1, 9 x E3/DS, 12 x STM-1/OC-3 • CES: 96 x E1 • 72 x (n x 64Kbps, FXO, FXS, 2/4W E&M, V24 (RS232), V35, V36, V11, RS422, RS449, C37.94, OMNI, CODIR, G.703 64K)
Physical dimensions	H x W x D: 3.5" x 17.4" x 9.6" / 88 x 443 x 243 mm

Specifications subject to change without notice

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